

Food Sources of Selenium



What is selenium?

Selenium is a trace element that is essential in small amounts but can be toxic at high levels. Selenium is an integral part of glutathione peroxidases, which are important for protecting the body from damage caused by free radicals and infection. Selenium also supports thyroid hormone metabolism through selenium-dependent iodothyronine deiodinase enzymes which convert inactive T4 into biologically active T3.

Selenium is involved in DNA synthesis as part of thioredoxin, which donates hydrogen for ribonucleotide reductase essential for DNA synthesis. Selenium is one of the nine biological trace elements important for reproduction.

While regularly consuming the RDA is necessary for nutritional adequacy, following a short-term, low selenium diet may be required prior to laboratory testing or for medical procedures. In these instances, choose foods with the lowest selenium content and avoid high selenium foods.

How much selenium is needed?

The amount of selenium you need each day depends on your age.

Life Stage	RDA*	UL**
Birth to 6 months	15 mcg	45 mcg
Infants 7–12 months	20 mcg	60 mcg
Children 1–3 years	20 mcg	90 mcg
Children 4–8 years	30 mcg	150 mcg
Children 9–13 years	40 mcg	280 mcg
Teens 14–18 years	55 mcg	400 mcg
Adults 19–50 years	55 mcg	400 mcg
Adults 51–70 years	55 mcg	400 mcg
Adults 71 years and older	55 mcg	400 mcg
Pregnant teens and women	60 mcg	400 mcg
Breastfeeding teens and women	70 mcg	400 mcg

*Recommended Daily Allowance (RDA): The average daily level of intake sufficient to meet the nutrient requirements of nearly all (97-98%) healthy people.

**Tolerable Upper Intake Level (UL): The maximum daily intake unlikely to cause adverse health effects.

Where is selenium found?

Food	Standard Serving Size	Average Selenium Content (mcg)
Brazil nuts	1 ounce (6 kernels)	537*
Tuna, yellowfin	3 ounces	92
Oysters	3 ounces	65
Clams	3 ounces	51
Sardines	3 ounces	45
Shrimp	3 ounces	42
Halibut	3 ounces	40
Pork	3 ounces	38
Pasta, cooked	1 cup	28
Turkey	3 ounces	26
Cottage cheese, 1%	1 cup	20
Egg, hard-boiled	1 large	15
Chicken, breast	3 ounces	15
Baked beans	1 cup	13
Oatmeal, cooked	1 cup	12
Brown rice, cooked	1 cup	11
Lamb	3 ounces	8
Yogurt, plain, low fat	1 cup	8
Milk, 1%	1 cup	8

*Above the tolerable upper intake level (UL) of 400 mcg/day.

For more information on **selenium**, see the National Institutes of Health Office of Dietary Supplements [Health Professional Fact Sheet](#) and [Fact Sheet for Consumers](#).

References

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